Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-57 (canceled).

Claim 58 (currently amended): A method of screening proteins and polypeptides to identify a protein or polypeptide having a biological activity of interest, which comprises the sequential steps of (i) forming a first library, which comprises polynucleotide clones; (ii) expressing by *in vitro* transcription and translation an individual protein or polypeptide from each clone in the first library to form a second library, which comprises individual proteins and polypeptides derived from each polynucleotide clone in the first library; (iii) assaying the second library to select an individual protein or polypeptide in the second library having a biological activity of interest; and (iv) identifying the protein or polypeptide selected in step (iii) by sequencing a polynucleotide clone from the first library that encodes the individual protein or polypeptide selected from the second library in step (iii), ~~The method of claim 1~~ wherein the first library of polynucleotide clones in step (i) is a library of transformed bacterial cell colonies; the second library of individual proteins and polypeptides is formed by *in vitro* transcription and translation of a polynucleotide from each bacterial cell colony in step (ii); and the biological activity of interest in step (iii) is the ability to effect a post-translational modification of a protein or polypeptide from a tissue extract.

Claim 59 (previously presented): The method of claim 58 wherein the tissue extract is a human brain tissue extract.

Claim 60 (previously presented): The method of claim 58 wherein the post-translational modification is proteolysis.

Claim 61 (previously presented): The method of claim 58 wherein the post-translational modification is phosphorylation.

Claim 62 (currently amended): A method for screening proteins and polypeptides to identify a protein or polypeptide having a biological activity of interest, which comprises the sequential steps of:

(i) generating a first library, which comprises polynucleotides in the form of clones selected from the group consisting of DNA molecules, RNA molecules, cell colonies, and plaques;

(ii) expressing a polynucleotide from each clone in the first library using *in vitro* transcription and translation to generate a second library, which comprises individual proteins and polypeptides;

(iii) dispensing an aliquot of each protein or polypeptide in the second library into a specific locus in a multi-well plate or a solid phase to form a protein and polypeptide array;

(iv) contacting the protein and polypeptide array generated in step (iii) with a material selected from the group consisting of a cell extract, a tissue extract, a cell sample, and a tissue sample;

(v) assaying each protein and polypeptide in the array to select an individual protein or polypeptide that interacts with the material contacting the array in step (iv), and

(vi) identifying the individual protein or polypeptide selected in step (v) by sequencing the polynucleotide that encodes the selected protein or polypeptide;

wherein the interaction of the protein or polypeptide with the material contacting the array in step (v) is an interaction selected from the group consisting of modification of a protein or polypeptide in the array, binding of a protein or polypeptide in the array to a molecule from a cell, and binding of a protein or polypeptide in the array to a molecule from a tissue and ~~The method of claim 15~~ wherein the first library of polynucleotide clones in step (i) is a library of transformed bacterial cell colonies; the protein and polypeptide array is contacted with a tissue extract in step (iii); and in step (iv) the protein and polypeptide array interacts with tissue extract by post-translational modification of a protein or polypeptide from the tissue extract.

Claim 63 (previously presented): The method of claim 62 wherein the tissue extract is a human brain tissue extract.

Claim 64 (previously presented): The method of claim 62 wherein the post-translational modification is proteolysis.

Claim 65 (previously presented): The method of claim 62 wherein the post-translational modification is phosphorylation.